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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/208,396	07/30/2002	Tsutomu Shimada	ASM-P-02-010	3770

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02/27/2003

EXAMINER

DINH, PHUONG K

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 02/27/2003

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Amendm*

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/957,400

Applicant(s)

NAITO, TAKAHIKO

Examiner

Edgardo San Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - The Abstract does not follow the proper format, the first line of the Abstract is redundant, "This invention relates to", in addition, the Abstract contains an excess of 182 words;

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

- On Page 5, Line 7, should read - - internal tube 2 - -, instead of "internal tube 1".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 – 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the internal tube and the external tube" in Line 2.

There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the internal tube and the external tube" in Line 3+.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flugger (US 5,892,186) in view of Chien (US 5,266,755).

With respect to Claims 1 and 6, Flugger teaches an engine muffler (Fig.1, Item 10) comprising a sound absorbing material (Fig.1, Item 20) interposed between an internal tube (Fig.1, Item 17) and an external tube (Fig.1, Item 15), and wherein the ends of the external tube are drawn, but fails to disclose wherein a projection projecting toward the sound absorbing material is formed on the external tube along almost entire periphery thereof.

On the other hand, Chien teaches an engine muffler (Fig.2) comprising a sound absorbing material (Fig.2, Item 4) and a projection (Figs.2 and 3, Item 16) projecting toward the sound absorbing material is formed on an external tube (Figs.2 and 3, Item 1) along almost entire periphery thereof.

It would have been obvious to a person with ordinary skill in the art to employ the Chien projection in the Flugger muffler design because the projection would provide with a means to firmly secure the position of the sound absorbing material within the muffler.

With respect to Claim 4, Flugger teaches an exhaust air guiding tube (Fig.1, Item 33) provided inside of the internal tube (Fig.1, Item 17).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flugger (US 5,892,186) in view of Chien (US 5,266,755), and further in view of Nozaki (JP 2001-123829) (US 6,438,949 will be used as an equivalent translation of the Japanese Patent Application).

Flugger and Chien teach the limitations discussed in the previous rejection, but fail to disclose a stay for holding the muffler by suspending the same from the bottom portion of the vehicle body of the automobile; and the stay being provided in the recess along the projection.

Nevertheless, Nozaki teaches a muffler shield panel (Fig.2, Item 36) comprising a recess (Fig.2, Item 46) formed by forming the projection by pressing a portion of the external tube inwardly; a stay (Fig.2, Item 37) for holding the muffler shield panel, and suspending the muffler from the bottom portion of the vehicle body; and the stay being provided in the recess along the projection.

It would have been obvious to a person with ordinary skill in the art to employ the Nozaki muffler mounting design with the Flugger and Chien muffler design because the Flugger and Chien projection could be use as the Nozaki recess, and in addition to securing the sound absorbing material, could be used in combination with a stay to hold the muffler to the vehicle and preventing the movement of the muffler due to vibrations, as described by Nozaki.

5. Claims 2, 3, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flugger (US 5,892,186) in view of Chien (US 5,266,755), and further in view of Morikawa (US 6,223,434).

With respect to Claim 2, Flugger and Chien teach the limitations discussed in a previous rejection, but fail to disclose wherein the sound absorbing material comprises a

plurality of kinds of sound absorbing materials having different heat resisting properties and sound absorbing capabilities, and is interposed in a state of being multilayered in the direction of thickness.

On the other hand, Morikawa teaches a muffler comprising a sound absorbing material comprises a plurality of kinds of sound absorbing materials having different heat resisting properties and sound absorbing capabilities, and is interposed in a state of being multilayered in the direction of thickness (Fig.7, Items 9 and 10; Col.5, Lines 44 – 55).

It would have been obvious to a person with ordinary skill in the art to employ the Morikawa multilayered sound absorbing materials in the Flugger and Chien muffler design, because the multilayered sound absorbing materials would attenuate the sound produced by the engine in a wide frequency range, increasing the efficiency and performance of the muffler.

With respect to Claim 3, Morikawa teaches wherein the sound absorbing material comprises stainless wool (Fig:7, Item 9) disposed on the outer periphery of the internal tube and glass wool (Fig.7, Item 10) layered on the outer periphery thereof (Col.5, Lines 44 – 55).

With respect to Claims 7 and 8, Morikawa teaches a method of manufacturing a muffler comprising sound absorbing material and employing a drawing process. The Examiner considers that the order in which the process is done is a designer choice.

Depending on the design constraints, the process could be manipulated to be optimized based on time, economy and/or manpower.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Steenackers et al. teach an exhaust system for a motor vehicle and motor vehicle, Matsuoka et al. teach a muffler for internal combustion engine, Abbott teaches a method of making a catalytic converter with one piece housing, Raczuk teaches a muffler apparatus, Heath teaches a heat shield for exhaust system, Selig teaches a muffler with spaced concentric tubular member, Ludlow et al. teach an acoustically treated gas pipe, Gohara teaches a sound absorbing muffler and manufacture thereof, and Izuhara teaches a submuffler for automobile.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (703) 308-1050. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Edgardo San Martin
Patent Examiner
Art Unit 2837
Class 181
February 23, 2003


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